ISSN 2262-9017
Jardin Botanique de Guyane
nouvelle série RICHARDIANA
Volume 2
http://richardiana.jardinbotaniquedeguyane.com

# *Gracielanthus trufulae* (Orchidaceae), a new species from Guatemala

Fredy Archila Morales[1,2], Guy R. Chiron[3] & Oswaldo Montejo López[1]

[1]Estación Experimental de orquídeas de la familia Archila - archilae@gmail.com
[2]Herbario BIGU, Universidad de San Carlos de Guatemala
[3]Herbiers, Université de Lyon 1, F-69622 Villeurbanne Cedex (France)

## Abstract

During a recent botanical exploration in the vicinity of the city of Jacaltenango, Guatemala, an orchid was found, with characters so different from any known plant that it was initially considered to possibly represent a new genus. The study of the morphological characters showed that it was in fact a new species belonging to the genus *Gracielanthus*, even though it produced a whitish hyaline latex, a trait not previously described in this genus. The taxon is described and illustrated, and compared to its closest relative, *Gracielanthus riodelayensis*.

## Résumé

Au cours d'une récente exploration botanique dans les environs de la ville de Jacaltenango, au Guatemala, une orchidée fut trouvée, aux caractères tellement différents de toute plante connue qu'elle fut considérée, dans un premier temps, comme représentant possiblement un genre nouveau. L'étude ultérieure des caractères morphologiques a montré qu'il s'agissait en fait d'une espèce nouvelle appartenant au genre *Gracielanthus*, même si elle produisait un latex hyaline blanchâtre, caractère non décrit antérieurement dans ce genre. Le taxon est décrit et illustré, puis comparé à son plus proche parent, *Gracielanthus riodelayensis*.

Manuscrit reçu le 26/11/2018 Article mis en ligne le 19/12/2018 – pp. 185-190

## Resumen

En visitas y exploraciones recientes se encontró una especie con caracteres tan diferenciados que se pensó en un primer momento que se trataba de un nuevo género, al revisar los caracteres morfológicos se pudo determinar que se trataba de una nueva especie del género *Gracielanthus*, además poseía un látex hialino-blancuzco caracter no descrito anteriormente en este género. Se presenta a continuación el descriptor, diagnosis e icono botánico de la nueva especie.

**Keywords**: capitate inflorescence, floral bracts, latex, morphology, taxonomy.
**Mots clés** : bractées florales, capitule, latex, morphologie, taxinomie
**Palabras clave:** brácteas florales, capitado, látex, morfología, taxonomia.

## Introduction

Guatemala is a rather small country but its biogeography is complex, which allows hundreds of ecosystems. This has to do with its latitudinal position and its tectonic history. The latter caused large parts of land – of diverse origins with unique flora and fauna – to collide to give shape to this country, as happened with the blocks Chortís and Maya (Archila *et al*., in press). Within Orchidaceae, this led to a large number of genera, 223 according to those authors.

Within the great diversity of orchids there are some very homogeneous characters. In particular, many terrestrial orchids show a great homogeneity in their vegetative characters, even if they belong to different genera. This fact makes uneasy the analysis of a group of plants already complex to study due to its annual ephemeral character. In some cases, based on the vegetative characters, it is difficult to determine the genus we deal with or, when it is possible to determine the genus, it is difficult to determine the species. Thus, finding a plant whose vegetative characters allow us to recognize a taxon new for science is very surprising. It was the case of the plant presented in this article, which develops a turion as in *Asparagus*. This turion then apically develops leaves and large floral bracts forming a head from which the flowers develop at the base. The latter emit an odor that attracts pollinating flies.

During recent explorations, the third author found a plant with so much distinctive characters that it was believed, at first glance, a new genus. After reviewing the morphological characters, we decided that it was a new

species belonging to the genus *Gracielanthus* R. Gonzales & Szlachetko (1995: 760), with an unique character, a hyaline-whitish latex from the main nerves of the leaves.

The genus *Gracielanthus* was described based mainly on the combination of two characters, subsessil lip and column foot shorter than the column (Szlachetko *et al.*, 2005). Up to now it consists of two species, both present in Guatemala (Archila, 2014): *G. pyramidalis* (Lindley, 1840: 473) R. Gonzales & Szlachetko (1995: 761) – already listed in Ames & Correll (1952-1953) – and *G. riodelayensis* (Burns-Balogh, 1988: 151-152) R. Gonzales & Szlachetko (1995: 763). Pridgeon *et al*. (2003) did not accept this genus and put it within the synonymy of *Aulosepalum* Garay (1982: 298). However the two above distinctive characters clearly separate both genera.

We present this new species with a detailed description, illustrations and comparison with its closest relative, *Gracielanthus riodelayensis*.

## Taxonomic treatment

***Gracielanthus trufulae* Archila & Chiron, *sp. nov.***

Type: Guatemala, Huehuetenango, Jacaltenango, 1437 m s.n.m. V/2018, col. Oswaldo Montejo López; floreció en cultivo en la Estación de Orquídeas en Junio, *FA-sn* (BIGU).

Etymology: the specific epithet refers to the Trufula trees of the film *The Secret of the Lorax*, *in Search of the Lost Trufula*, because of the similar shape of this orchid with the plants of the story, and because the story shows us that human greed can end with natural resources, as it is happening with orchids.

*Haec herba Gracielanthus riodelayensis (Burns-Balogh) R. Gonzales & Szlachetko similis est sed bracteis longioribus, sepala petalisque leviter tortis haud rectis, petalis basi rotundatis falcatisque, labello apice acuminato, ovario leviter pubescente, differt.*

Terrestrial plant ; leaves 9 cm long, 3 cm wide, producing a latex along the main nerves; leaves absent at flowering time; floral stalk like a turion, up to 30 cm long, furnished with bracts not papery, but dry when the flower opens, 6.3 cm long, 2 cm wide, obliquely oblong-elliptic, apically dentate, appressed against the floral stalk; inflorescence capitate, 10-12 cm diameter, with bracts of 3 different types: at the base of the capitate head the bracts are obovate, with an acuminate apex and proximal margins distinctly

inflexed, forming a canal at the base; the floral bracts are canaliculate with an acuminate apex, 3.4 cm long, 0.45 cm wide in their natural shape and 0.9 cm wide flattened; and, in the center of the head, where there is no flower, the bracts are triangular, acuminate, basally inflexed, 1.55 cm long, 0.4 cm wide; flowers white with dark coffee-brown lines, with ovary always hiden by the perianth ; dorsal sepal ca. 0.8 cm long, 0.2 cm wide at the base, slightly twisted, with a basal part obliquely orbicular and an apical part subulate bent-geniculate; lateral sepals similar in shape, falcate, 0.75 cm long, 0.25 cm wide at the base, slightly twisted, apically slightly bent; petals 0.45 cm long, 0.2 cm wide, with basal part orbicular and an apical part subulate falcate; lip panduriform, apically acuminate, 0.4 cm long, 0.15 cm wide; gynostemium 0.4 cm long, 0.1-0,15 cm wide at the apex, ventrally pubescent; ovary oblong, 0.25 cm long, with rows of pubescence, apically glandular. Fig. 1, 2 & 3.

**Fig. 1.** ***Gracielanthus trufulae***
inflorescence [ph. Fredy Archila]

Taxonomic notes. In *Gracielanthus trufulae*, as in the two already described species, the leaves are fallen down when the flowers open. *G. pyramidalis* has also a terminal inflorescence but not compact whereas *G. riodelayensis* has an inflorescence very similar to that of the new species, however with shorter bracts. Furthermore it has sepals and petals straight, petals oblong-oblanceolate, a lip apically truncate and an ovary minutely pubescent.

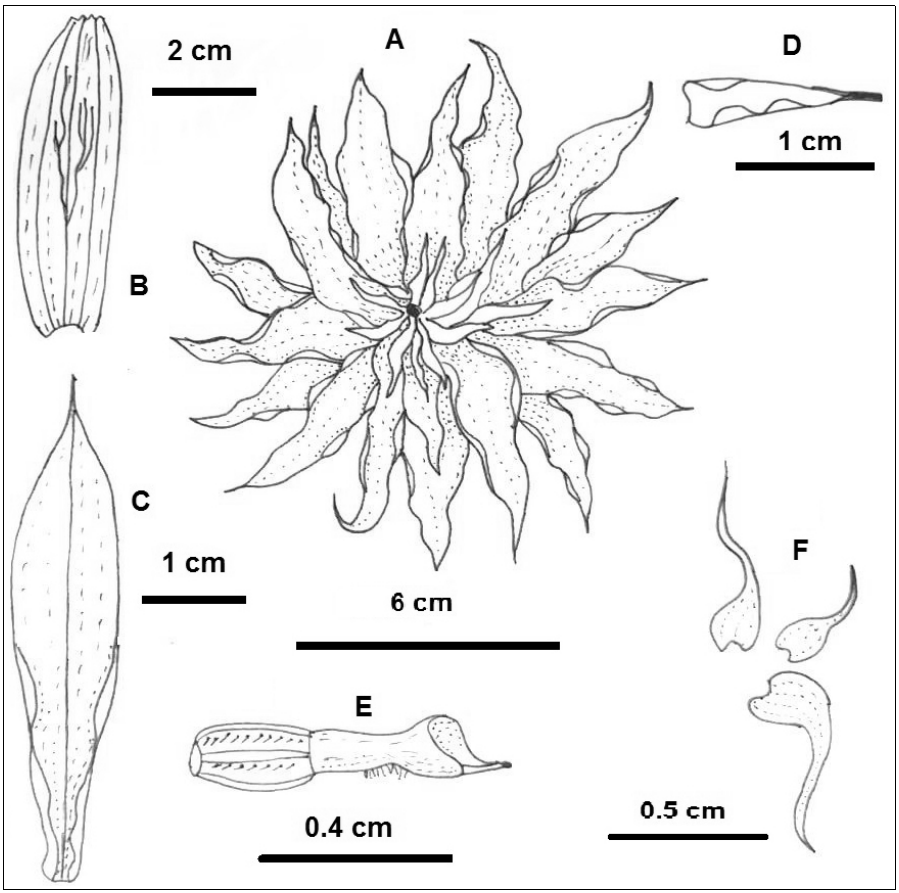


**Fig. 2.** ***Gracielanthus trufulae***

A. Head of inflorescence; B. Bract of inflorescence (that covers the peduncle of inflorescence); C. Bract of inflorescence (an external one in the head of inflorescence); D. Bract of inflorescence (at the top of the head); E. Ovary and gynostemium; F. Sepals and petal. [drawing Fredy Archila]

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**Fig. 3. *Gracielanthus trufulae***
Head of inflorescence with 2 flowers [ph. Fredy Archila]

## Erratum

Une erreur typographique entache le titre de la note publiée le 14.11.2018, en pages 172-174.
A typographic error made the title of the note published on 14.11.2018, pp. 172-174, wrong.
Le titre correct est – the correct title is:

**Note on the *Verapazia* vs. *Muscarella* (Pleurothallidinae, Orchidaceae) issue, with some new combinations.**